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Effects of Life Review on Happiness and Life Satisfaction in Older Adults

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EFFECTS OF LIFE REVIEW ON HAPPINESS AND LIFE SATISFACTION IN OLDER ADULTS

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EFFECTS OF LIFE REVIEW ON HAPPINESS AND LIFE SATISFACTION IN OLDER ADULTS

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Dedicated to my mother and father who have always encouraged me to go beyond the expectation.

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EFFECTS OF LIFE REVIEW ON HAPPINESS AND LIFE SATISFACTION IN OLDER ADULTS

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Life review involves a systematic, chronological review of an individual's life from birth to death as well as an examination of the meaningfulness of life experiences and events. The purpose of the current study was to discover the effects of life review on happiness and life satisfaction in the older population. Participants from 71 to 85 years of age completed a demographics questionnaire, the Subjective Happiness Scale (SHS) and the Satisfaction With Life Scale (SWLS). SHS and SWLS were completed every other day from the beginning to the end of the data collection process. Once a consistent baseline was reached for the individual, the life review process began. Participants shared experiences from childhood and adolescence, adulthood, and older adulthood during the course of three sessions. At the end of the third session, participants were asked to write a letter to their younger self. It was hypothesized that engaging in the life review process would increase life satisfaction and happiness in the elderly. Results revealed that the life review intervention did not affect participants' levels of life satisfaction and subjective happiness, with the exception of participant four who displayed increases in these variables.

Introduction

Depression in People Who Are Older

The percentage of elders is growing, and because of this, current research on health issues related to this population is needed (McMurdo, Witham, & Gillespie, 2005). Older adults currently represent 13.7% of the population and one in every eight Americans is 65 or older (Administration on Aging, 2013). By 2060, 92 million Americans will be 65 and older (Administration on Aging, 2013). Current research shows that psychosis, anxiety, and depression are found to be more prevalent in the elderly population than previously suspected, which suggests a vital need for research on successful therapeutic techniques for the geriatric population (Onat, Delialioglu, Demet, Ankara, Fakultesi, & Diyarbakir, 2014). Current research suggests that the prevalence of clinically significant depressive symptoms in older adults is estimated to be between 10 and 15% (Beekman, Copeland, & Prince, 1999). The presence of depressive symptoms that do not meet diagnostic criteria are the most significant risk factors for developing late life depression in older adults (Cuijpers, De Graaf, Van Dorsselaer, 2004; Smit, Ederveen, Cuijpers, Deeg, Beekman, 2006).

Intervention With The Elderly

Many older adults experience depressive symptoms but do not meet diagnostic criteria for a diagnosis (Korte, Bohlmeijer, & Smit, 2009). Effective interventions are needed to improve the well-being of older adults who have subclinical symptoms. The first step is increasing awareness of this need and then encouraging older adults who display symptoms to seek help. In comparison to younger adults, research suggests that older adults generally engage in less help seeking behaviors across a wide range of

situations (Johnson, 1993). Many factors contribute to the decreased use of mental health services by persons who are older, such as low recognition rates by health care providers, lack of insight regarding the severity of the symptoms, deficient knowledge about available services, hesitance to accept help, and an overall reluctance to engage in treatment (Bohlmeijer, Smit, & Cuijpers, 2003). Different techniques can be utilized to promote awareness of depression in older adults (Cuijpers, 1998; Friedhoff, 1994; Gottlieb, 1994), including routine screening for depression by health care providers (Friedhoff, 1994), educational programs regarding depression in older adults (Friedhoff, 1994), available and easily accessible outreach programs for depression (Cuijpers, 1998), and public awareness seminars (Jacobs, 1996; Magruder, Norquist, Feil, Kopans, & Jacobs, 1995). While many options exist, few older adults receive adequate treatment for depression (Gottlieb, 1994; Zivian, Larsen, Gekoski, Hatchette, & Knox, 1992).

Review and Reminiscing

Once older adults become aware of their symptoms and engage in help seeking behaviors, interventions can be put into place to alleviate their symptoms. Review and reminiscence techniques could be effective approaches for improving detection and treatment rates of depression in older adults (Bohlmeijer et al., 2003). Life review involves a systematic, chronological review of an individual's entire life from birth to death as well as an assessment of the meaning of these life experiences (Gibson 2004; Haber 2006; Woods, Spector, Jones, Orrell, & Davies, 2005). Professionals oftentimes use the word "life review" interchangeably with "reminiscence", "guided autobiography", "personal narrative", and "oral history" (Haber, 2006). Each author usually specifically defines the terms, and at times, they are simply used interchangeable

(Haber, 2006). Precise definitions of each term have not yet been developed, but special attention has been given to the differentiation between reminiscence and life review (Haber, 2006).

Reminiscence involves recalling and reflecting back on early experiences and memories (Haber, 2006). This may be referred to as daydreaming or feeling nostalgic. Reminiscence is part of the life review process, but it is not equal to it. Life review is usually structured around life themes, such as married life, parenthood, and retirement. In addition, this technique identifies historical events and major turning points in the individual's life. Life review is the process of recalling events from the past to resolve issues and cultivate balance in one's life (Butler, 1963). More so than reminiscence, life review is more of an evaluative process (Haber, 2006). While both methods involve memory and recall, life review is typically conducted for therapeutic purposes to help people find meaning in negative life events (Haber, 2006). Life review and reminiscence are similar in that they are conducted to solely benefit the one who is sharing his or her life experiences. In contrast, autobiographies and oral histories are meant to inform and educate the larger society (Gibson, 2004).

Receptivity of Life Review in Older Adults

Research suggests that older adults may be more receptive to life review in comparison to other approaches (Bohlmeijer, Westerhof, Emmerick-de Jong, 2008). It is hypothesized that a central component in life development is to find or create a sense of meaning and purpose as an individual (Luepker, 2003). Children develop a sense of identity and understanding of self through storytelling and this practice continues into older adulthood (Luepker, 2003). Erikson, Erikson, & Kivnick (1986) theorized that

older adults have a greater desire to reflect on life experiences and accomplishments in an effort to form a coherent life story. He identified the older adults' main developmental issue as revolving around integrity versus despair and disgust (Erikson, 1950). Partaking in the life review process may be a natural and useful method for older adults to practice (Luepker, 2003). Older adults often share memories and stories spontaneously, so life review could be a non-intrusive and feasible technique to help individuals begin evaluating the stories they share. Butler (1963) described life review in the later stages of life as:

> A naturally occurring universal mental process characterized by the progressive return to consciousness of past experiences, and particularly, the resurgence of unresolved conflicts; simultaneously and normally, these revived experiences can be surveyed and reintegrated and can either promote the evolution of candor, serenity, and wisdom or contribute to the occurrence of late life disorders, particularly depression (p. 54).

The life review process involves recollection of life events, which can be emotional and intense for some individuals to go through. The process is not completely free of harm, as recollecting unfortunate life experiences and events can be emotionally draining (Hirsch & Mouratoglou, 1999). However, people may have gone through much of their life avoiding these emotionally charged events, preferring to ignore that they occurred rather than spending time finding meaning in the occurrence (Hirsch & Mouratoglou, 1999). Therefore, while life review involves the recollection of positive

events, it also involves the acceptance of past conflicts and feelings of guilt and resentment (Hirsch & Mouratoglou, 1999). Lewis & Butler (1974) hypothesized that this type of intervention is only successful if the individual is able to effectively resolve past issues. If the individual is able to find meaning and happiness in the story, they develop a sense of self-acceptance and ego integrity (Hirsch & Mouratoglou, 1999). While there are chances of pain, anger, guilt, or despair, there is also an opportunity for the individual to experience forgiveness, celebration, acceptance, and affirmation (Lewis & Butler, 1996). This process has the possibility to encourage personal growth for a group of people who are going through the final stages of life.

Effectiveness of Life Review

Reductions in Depressive Symptoms

Life review has been used for a variety of purposes when working with older adults, such as improving cognitive functioning in older adults, increasing life satisfaction and quality of life, and as a way to screen for depressive symptoms (Bohlmeijer et al., 2003). Bohlmeijer et al. (2003) performed a meta-analysis to assess the effectiveness of life review and reminiscence for treatment of late life depression. For each of the 20 studies included in the meta-analysis, a standardized effect size was calculated and a random effects analysis was conducted. Studies were only included if they examined the effects of life review or reminiscence as a basic intervention, reported pretest and posttest data, used a control group, incorporated a depressive symptoms measure, and reported data for the calculation of effect sizes. Results showed an effect size of .84, which indicates a significant effect of life review and reminiscence on decreasing depressive symptoms in older adults. The effect is similar to those found for

well-established treatments, such as pharmacotherapy and psychological treatments for depression. This suggests that reminiscence and life review could be effective treatments for older adults with depressive symptoms, and could potentially be used as a substitute for medication or other mainstream psychological treatments.

The effect was larger for individuals with elevated symptoms of depression compared to other subjects, indicating that life review is beneficial for those suffering from more severe symptoms of depression (Bohlmeijer et al., 2003). Life review could be beneficial for individuals in non-institutionalized settings with untreated depressive symptoms. The intervention could help individuals and their caregivers become aware of any latent depressive symptoms so that improvements in psychological well-being can be made. In addition, life review is an appropriate intervention for persons of varying levels of cognitive ability. The intervention does not require the individual to engage in strenuous cognitive exercises or learn complex skills. Because older adults are receptive to life review, this technique may be helpful in identifying symptoms closer to their onset, thus increasing treatment rates for depression. Bohlmeijer et al. (2003) identified a limitation in that the meta-analysis only focused on studies that measured the effects of life review and reminiscence on depressive symptoms. Effects of life review could also include an increase in life satisfaction, self-esteem, and well-being.

Life Review and Cognitive Theories of Depression

Recently, life review has been incorporated into other therapeutic theories with clients suffering from depression and other types of mental distress (Bohlmeijer et al., 2008). Watt and Cappeliez (2000) incorporated cognitive theories of depression with reminiscence theory to develop two structured forms of life review interventions. Watt

and Cappeliez (2000) sought to examine the impact of integrative and instrumental reminiscence interventions on depression and adaptive functioning in older adults in comparison to an active socialization control group. The inclusion of the socialization control group allowed an evaluation of factors that could have an effect on depression, such as social support, without being exposed to the reminiscence intervention.

The 26 subjects in the study all had clinically significant levels of depressive symptoms and were at least 60 years or older (Watt & Cappeliez, 2000). The subjects were randomly assigned to one of three groups (integrative, instrumental, or active socialization control). Groups consisted of 6 weekly sessions of 90 minutes and two follow-up sessions at 6 weeks and 3 months post intervention. The integrative group encouraged the recall of events and experiences that brought about a sense of meaning and purpose to one's life. It involved accepting negative events, positively evaluating one's self, and displaying a continuation of appreciation for past values and how they have formed current belief systems. The instrumental reminiscence focused on recollection of past plans and goals, past experiences of overcoming hardships, and drawing on these times to solve current issues. Participants in the active socialization group attended meetings addressing topics of concerns for members of this population, and they prepared a short written discussion on each theme of the week. Before the intervention and after the intervention, participants completed a number of questionnaires related to depression, social adjustment, motivation, hopelessness, self-esteem, attributional styles, life attitude, appraisal, and ways of coping.

Results revealed that individuals in both reminiscence groups showed statistically and clinically greater improvements in depression in comparison to the socialization

control group (Watt and Cappeliez, 2000). Both types of reminiscence groups were equally effective at improving levels of depression. Watt and Cappeliez (2000) also found that the effect sizes for the reminiscence interventions were within the range of those achieved by traditional therapies. Follow-up sessions were conducted 6 weeks and 3 months after the intervention. Additional improvements were made in comparison to the post intervention assessment, and participants indicated that they continued to engage in the reminiscence process on their own time (Watt & Cappeliez, 2000). Scogin and McElreath (1994) reported that clinical studies typically require more sessions to make an improvement, and they usually do not display such high effect sizes as the one present in the research by Watt and Cappeliez (2000). This swiftness in improvement may be due to a variety of factors. First, the intervention did not require individuals to learn a new set of skills before starting the intervention. It was a non-invasive technique that allowed the participant to focus on material that was most familiar to him or her. Participants were able to feel at ease knowing that they were in control of what material was bought up and discussed in session.

Life Review and Narrative Theories of Depression

Life review has been incorporated into narrative therapies as well (Korte, Bohlmeijer, & Smit, 2009). Narrative therapy uses personal memories to build a life story (Atwood & Ruiz, 1993). These memories are filled with both positive and negative life events. Reviewing negative life events can cause the individual to create life stories focused on problems and obstacles (Payne, 2000). Narrative therapy encourages the individual to deconstruct and reconstruct their personal memories rather than change

cognitive processes, like cognitive behavioral techniques suggest (Bohlmeijer et al., 2008).

Researchers developed an intervention, "The story of your life", which is based on material from guided autobiographies (Birren & Deutchman, 1991). In this process, participants are encouraged to write essays related to themes of life events. All participants were 55 years and older and displayed mild to moderate levels of depressive and anxiety symptoms (Korte et al., 2009). Fifty-seven individuals were in the intervention group and 36 participants were in the control group. The intervention consisted of seven 1.5 hour-long sessions and one follow-up session 8 weeks after the intervention. The study was implemented in six community health centers using a quasi-experimental design (non-randomized), comparing the intervention group with a control group. Participants were placed in each group in order of referrals. Participants completed the SELE-sentence completion questionnaire assessing meaning in life a week before the intervention and after the intervention. Because participants displayed depressive symptoms, the intervention focused on developing more positive life stories. Participants were instructed to reflect on a question, answer the question on their own time, and then read their response out loud to the group. The counselor's goal was to encourage group discussion and assist participants in creating positive alternative stories.

Results revealed that the intervention group improved on the meaning of life measure (Korte et al., 2009). However, the effect size was not significant in comparison to the control group. This may be due to the fact that more training may have been needed for counselors conducting the narrative and life review therapy. Counselors from the Watt and Cappeliez (2000) study, which yielded large effect sizes, attended 4 weeks

of training and 2 hours of supervision each week of the intervention. Another explanation as to why the intervention was not as successful as it was hypothesized to be may have been due to participants' receptivity of the intervention (Korte et al., 2009). Wink and Schiff (2002) and Coleman (2005) emphasize that reminiscence is only effective for older adults open and accepting of the process. Receptivity of life review should be discussed with participants in the intake conversation so that anyone with negative attitudes towards life review does not participate in the study.

While the effect sizes for overall meaning of life were not large, the specific sources of meaning revealed effects from the intervention (Korte et al., 2009). In the intervention group, the participants reported fewer negative evaluations about self and positive feelings about social relations. In addition, participants were less negative about their past and more positive about their future. In regards to gender, women were less negative towards themselves after the intervention in comparison to men. Women became less negative about the past, and men became less negative regarding their future. Studies on reminiscence suggest that women would benefit more from integrative reminiscence, which focuses on emotional experiences, while men would benefit more from instrumental reminiscence, which focuses on past accomplishments and acceptance techniques (Bohlmeijer et al., 2008).

Life Review and Life Satisfaction

Chiang, Lu, Chu, Chang, and Chou (2008) studied the effects of life review on participants' levels of life satisfaction. Researchers formed a life review group with older adults in Taiwan. Seventy-five males ages 65 and older from a Veteran's home were randomly selected to either a treatment or control group. The intervention group

participated in an 8-week life review group program while the control group participated in their usual daily routine. The group met once a week with therapy lasting 1 to 4 hours long. Subjects were evaluated before the intervention, after the intervention, and one month later to evaluate the effects that life review had on self-esteem and satisfaction with life. The intervention consisted of group discussions on various topics, such as family, career life, social life, and accomplishments. Techniques were also incorporated into the intervention, such as role-playing and group activities. A nurse with several years of experience in leading life review group programs was in charge of leading the intervention group. Results revealed that life satisfaction was increased from pretest to posttest and at the one-month follow up. Researchers hypothesized that the life review group improved participants' life satisfaction by helping them develop a more positive perspective on their lives and increasing their appreciation for their current living conditions. Furthermore, it was hypothesized that the life review group helped the individuals seek out new resources, cultivate new hobbies, and uncover hidden or neglected desires, goals, and strengths. This type of life analysis appeared to offer a sense of resolution regarding past situations that were previously filled with doubts and concerns.

Preschl, et al. (2012) developed a randomized controlled trial of life review comparing face-to-face therapy with computer supplements to a control group. Thirty-six participants 65 years and older were recruited through public advertisements. The intervention group began the study a week after baseline data was collected, while the control group began the intervention 6 weeks after baseline data was collected. Both groups attended one session a week for 6 weeks. Each session lasted around 1 to 1.5

hours long. Depression, self-esteem, and life satisfaction measurements were given to participants before and after the intervention. The intervention was divided into two parts: a face-to-face part (roughly two-thirds of the session time) and a computer part (roughly one-third of the session time). Participants were provided with questions in the computer and face-to-face aspects of the intervention that asked about both positive and negative life events. The questions were merely suggestions, participants were free to ignore or expand upon questions if they wished. Therapists in the face-to-face part were also free to ask additional questions of their own.

In general, the face-to-face intervention involved restructuring negative life events (Preschl et al., 2012). The computer part of the intervention was broken down into two modules. The first module taught the participants techniques to elevate mood and recall positive memories. The second module involved having participants create a 'Book of Life,' in which participants were encouraged to write about positive experiences and memories in detail, using pictures, text, and music files to document positive life events. At the end of the intervention, each participant was given his or her "Book of Life" to remind him or her about the importance of maintaining a positive life perspective. The study showed that the face-to-face life review intervention with computer supplements was an effective technique for depressive older adults. Analysis revealed medium to large effect sizes in the face-to-face computer supplement group for decreasing depressive symptoms. The depression score also decreased from post treatment to follow up, which indicates that the intervention led to further positive effects on the participants. However, researchers did not find a significant change in life satisfaction from pre-intervention to post intervention. They hypothesized that life satisfaction may be a personality linked

construct that is stable in nature and less susceptible to change (Ryff, 1989). In addition, researchers speculated that the intervention focused more on reducing depressive symptoms than on increasing life satisfaction (Preschl et al., 2012). Lastly, results indicated that participants who had higher levels of self-esteem displayed less of a decrease in depressive symptoms compared to participants with lower levels of self-esteem. This could suggest that participants with the mildest levels of mental health issues benefited the least from the program.

Present Study

This study evaluates the effects of life review on happiness in older adults. While much of the research is aimed at studying effects of life review on depression, research does not evaluate the effects of life review on happiness in this population. Rather than screening for depressive symptoms throughout the life review process, the current study will screen for symptoms related to happiness. In addition, the literature is inconsistent with regards to the effects of life review on life satisfaction in older adults. Some studies suggest that life review therapy has improved life satisfaction and well-being (Bohlmeijer, Roemer, Cuijpers, & Smit, 2007; Chiang et al, 2008). These results differ from those found in the Preschl et al. (2012) study, which indicated that life review did not lead to significant changes in well-being or life satisfaction. The present study aims to gather further evidence regarding the effect of life review an individual's feelings of life satisfaction.

Life review is oftentimes referred to in the context of therapy, but this technique can also be beneficial to use with nonclinical populations. Individuals that do not suffer from depression may still experience mild symptoms of depression, which could lead to

more serious symptoms over time. The current study aims to evaluate whether life review can improve life outlook for the older adult population, preventing the development of serious mental illnesses. An advantage of the current study is the utilization of the N of 1 design. By measuring the effects of the intervention on four individuals, the researcher was able to give a greater amount of attention and focus to each participant throughout the life review process. It was hypothesized that the life review intervention would increase happiness and life satisfaction levels in each participant.

Method

Participants

This study was conducted at an independent living facility in Bowling Green, KY. Five volunteers agreed to participate in the study, but one of them was dropped from the study due to lack of communication with the researcher. Participant one was an eighty four year old female. Participant two was a seventy eight-year-old female. Participant three was a seventy one-year-old female. Participant four was an eighty five-year-old male. Participants one, two, and three were widows, and participant four was currently married. Participant one had been a resident of the community for four years, participant two for nine months, participant three for three months, and participant four for two and a half years. All four participants had completed high school and at least two years of college. All four participants identified as Caucasian. None of the participants had volunteered for a life review study at WKU in the past.

Materials

*Demographics Questionnaire***.** The Demographics Questionnaire was a five-item questionnaire regarding participants' age, gender, ethnicity, marital status, and residential life (see Appendix A).

*Subjective Happiness Scale***.** The Subjective Happiness Scale (SHS) is a four-item scale designed to measure subjective happiness (see Appendix B). Each item is completed through choosing one of the seven options that finish a given sentence fragment. The options are different for each of the four questions. The items from the SHS were summed to make a total score. The total points possible were 28. A score of 28 would indicate high levels of happiness. The average score on the Subjective Happiness

Scale ranges from eighteen to twenty-two (Lyubomirsky & Lepper, 1999). The items show good internal consistency with alphas ranging from .79 to .94 (*M*=.86). Based on information presented by Lyubomirsky and Lepper (1999), construct validation studies of convergent and discriminate validity confirmed the use of this scale to measure subjective happiness. The mean for older adults for each item on the SHS was *M* = 5.62, *SD* = .96. The mean and standard deviation of the full questionnaire was calculated by multiplying the mean and standard deviation of each item by four.

*Satisfaction with Life Scale***.** The Satisfaction with Life Scale (SWLS) is a short five-item instrument designed to measure global cognitive judgments of satisfaction with one's life (see Appendix C). The questions are answered on a seven point Likert-type scale, ranging from one (*Strongly Disagree)* to seven (*Strongly Agree).* Completion typically required about one minute of the participants' time. The items from the SWLS were summed to make a total score. The total points possible were 35. A score of 35 would indicate high levels of satisfaction with life. The average scores on the Satisfaction With Life Scale for older adults are 17.3 to 31.1 (Pavot & Dienor, 1993). Alpha coefficients consistently exceed .80, which indicates good internal consistency (Diener, Emmons, Larsen & Griffin, 1985). The scale also shows good convergent and discriminate validity with other emotional well-being scales (Pavot & Dienor, 1993). The mean for older adults on the SWLS is *M* = 24.2, *SD* = 6.9.

Intervention. A Narrative Life Review script was adapted from Hospice of Cincinnati. The researcher's version (see Appendix D) includes twenty-nine questions regarding life experiences from early childhood to late adulthood. The questions from the life review are written at a 2.7 reading level. An example from the life review

intervention is, “Tell me about your greatest struggles as an adult that you had to overcome” (Hospice of Cincinnati, 2015). The questions are created in order to celebrate the participant’s life and cultivate a meaningful conversation between the participant and researcher.

Design

The study used an N of 4, multiple baseline across subjects design. Using this method, the treatment variable was applied to the same behavior(s) of multiple subjects in the same setting but began and ended at different times to control for history. The treatment variable was the life review intervention and the behaviors measured were life satisfaction and happiness. The effectiveness of the intervention was evaluated using median split trend analysis (Wolery & Harris, 1982).

Procedure

First, the researcher received approval by the Western Kentucky University Institutional Review Board to conduct the study (see Appendix E). Participants were recruited from an independent living community in Bowling Green, KY. Flyers were placed on the facility activity board in order to recruit potential volunteer participants for the study. At the information session, participants were informed of the nature of life review, and the requirements of the intervention process, such as completing questionnaires on a regular basis and attending sessions.

Participant one was the only individual recruited during the information session at Village Manor. The other participants volunteered for the study at a later time when they were provided with additional information on the study. Upon agreeing to participate in the study, participants completed the informed consent document (see Appendix F). They

also completed the demographics questionnaire, the Subjective Happiness Scale, and the Satisfaction With Life Scale after the informed consent document was signed. No incentives were given for participation in the study.

The two questionnaires were completed via telephone and in person after each intervention session. Questionnaires were completed continuously (roughly every two days) throughout the intervention process. The presentation of questionnaires was randomly ordered for each participant. Due to conflicting schedules, measurements were not consistently taken at the same time each day. The time range for measurement intake was typically within two to three hours of one another for each participant. Measurements for participant one were generally taken around 10:00 a.m. Measurements for participant two and three were generally taken around 11:00 am. Measurements for participant four were generally taken around 1:00 p.m.

Participants completed the Subjective Happiness Scale and the Satisfaction With Life Scale until baseline data was consistent. Consistency was reached when the past three measurement scores were within two data points of each other. The entire intervention took place in the Village Manor conference room. Participant one started the first life review session once baseline data was consistent. The following participants began the first life review session once their baseline data was consistent and once the previous participant had completed the second life review session. Therefore, start times among participants were staggered (started at different times) to control for the effect of history. For example, a severe snowstorm occurred during the data collection process. The adverse weather could have had an effect on the participants' happiness and life satisfaction levels. Because the treatment was introduced at different times, the researcher

could conclude that any changes observed in participants' happiness and life satisfaction levels were due to the effects of the intervention, rather than effects from other extraneous variables.

The life review intervention covered childhood, adolescence, adulthood, and older adulthood, which took three fifty-minute sessions. Participants were informed of the theme of each section, and that they would be asked a number of questions related to the theme. Participants were free to expand upon questions, and the researcher was also free to ask additional questions related to the topic of conversation as long as each question from the life review script was addressed by the end of the session. As evident in Figure 1 and Figure 2, there are four data points for participants one and two and three data points for participants three and four in the intervention phase. While the intervention was intended to consist of three sessions, scheduling conflicts caused sessions to be moved to later dates in participants one and two. The measurements had to be consistently taken, so a fourth data point was added to represent the instance when the intervention was not provided but measures still were given to the participants. At the end of the last therapy session, participants completed a "letter to his/her younger self". An analysis of the letters was not conducted. The letters were meant to serve as a reflective activity for the participants. Participants were debriefed on the purpose and the major hypotheses of the study after they completed the letter to themselves.

Results

Results from the Subjective Happiness Scale

Data on the SHS was analyzed using a median split method of analysis to compare scores from baseline to the intervention phase (Wolery & Harris, 1982). Medians from the analysis for all participants are displayed in Table 1. Data for all participants can be seen in Figure 1.

Table 1

Subjective Happiness Scores From Median Split Method of Analysis

	Baseline		Intervention	
Participants	First half	Second half	First half	Second half
Participant 1	19	22.5	21.5	22
Participant 2	28	27.5	27.5	27
Participant 3	18	22	22.5	21
Participant 4	24.5	24.5	27.5	28

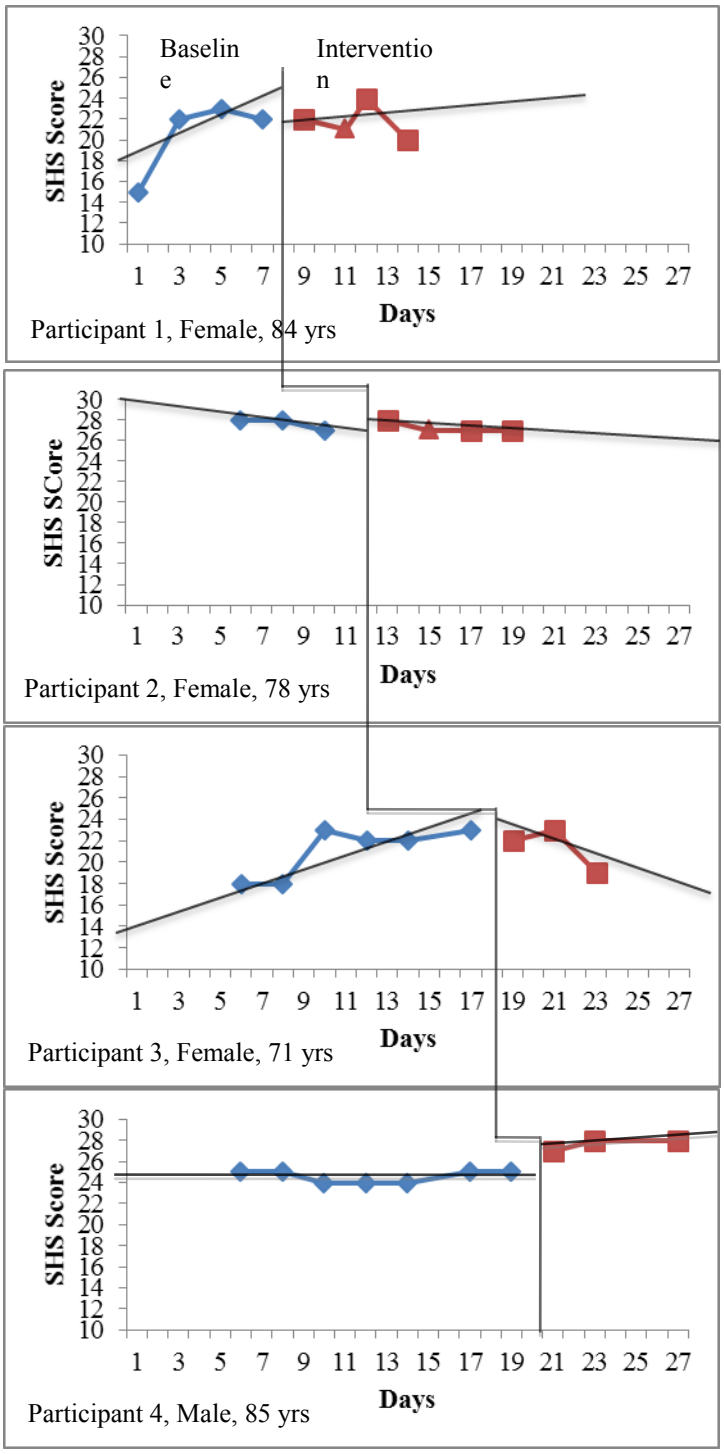

Figure 1. Trend Estimation of Subjective Happiness Between Participants.

Note. The triangular data point in the intervention phase denotes the instance when the intervention was not provided but the SHS was still completed by the participant.

Participant one displayed an increasing trend line (*First half Mdn*= 19, *Second half Mdn*= 22.5*)* during the baseline phase and a slightly increasing trend line (*First half Mdn*= 21.5, *Second half Mdn*= 22) in the intervention phase. Participant one displayed average levels of Subjective Happiness during the baseline and intervention phase. Average scores were based on mean calculations of the Subjective Happiness Scale. Participant one displayed an improvement in happiness levels during the initial period of the baseline phase and data remained relatively stable throughout the end of the baseline phase and intervention phase. There do not appear to be any effects on the participant's level of happiness due to the intervention. Data from the second half median of the baseline phase and data from the intervention phase differ by only 1 and .5 points. Using the standard deviation of the SHS as a guideline, large effects are found when scores differ by four points.

Participant two displayed a slightly decreasing trend line (*First half Mdn*= 28, *Second half Mdn*= 27.5) during the baseline phase and a relatively flat trend line (*First half Mdn*= 27.5, *Second half Mdn*= 27) in the intervention phase. See Figure 1. Participant two displayed above average levels of Subjective Happiness during the baseline and intervention phase. There do not appear to be changes in the participant's level of happiness from the baseline to the intervention phase. Data from the second half median of the baseline phase and data from the intervention phase differ by only .5 points.

Participant three displayed an increasing trend line (*First half Mdn*=18, *Second half Mdn*=22) during the baseline phase and a decreasing trend line (*First half Mdn*= 22.5, *Second half Mdn*= 21) during the intervention phase. See Figure 1. Participant three

displayed average levels of Subjective Happiness during the baseline and intervention phase. There was a four-point difference between participant three's first half median and second half median scores during the baseline phase, which suggests a large improvement in Subjective Happiness in the baseline phase. Data remained relatively stable until the last session of the intervention when Subjective Happiness scores dropped back to the initial baseline level. Subjective Happiness appeared to improve during baseline data collection and worsen once the study was coming to an end. While median scores do not substantially differ, fluctuations in the data indicate changes in Subjective Happiness from the beginning to the end of the study.

Participant four displayed a flat trend line (*First half Mdn*= 24.5, *Second half Mdn*= 24.5) during the baseline phase and an increasing trend line (*First half Mdn*= 27.5, *Second half Mdn*=28) during the intervention phase. See Figure 1. Participant four displayed average levels of Subjective Happiness in the baseline phase and above average levels of Subjective Happiness in the intervention phase. Participant four's data was relatively stable throughout the baseline phase. Improvements in Subjective Happiness scores occurred during the intervention period. The second half median score in the baseline phase and the second half median score in the intervention phase differ by five points, indicating a large change in Subjective Happiness levels.

Results from the Satisfaction With Life Scale

Data on the SWLS was also analyzed using a median split method of analysis to compare scores from baseline to the intervention phase (Wollery & Harris, 1982). Medians from the analysis for all participants are displayed in Table 2. Data for all participants can be seen in Figure 2.

Table 2

Satisfaction With Life Scores From Median Split Method of Analysis

	Baseline		Intervention	
Participants	First half	Second half	First half	Second half
Participant 1	25.5	27.5	24	26
Participant 2	27	27.5	28.5	26.5
Participant 3	23	25	24	24
Participant 4	31.5	30	34.5	35

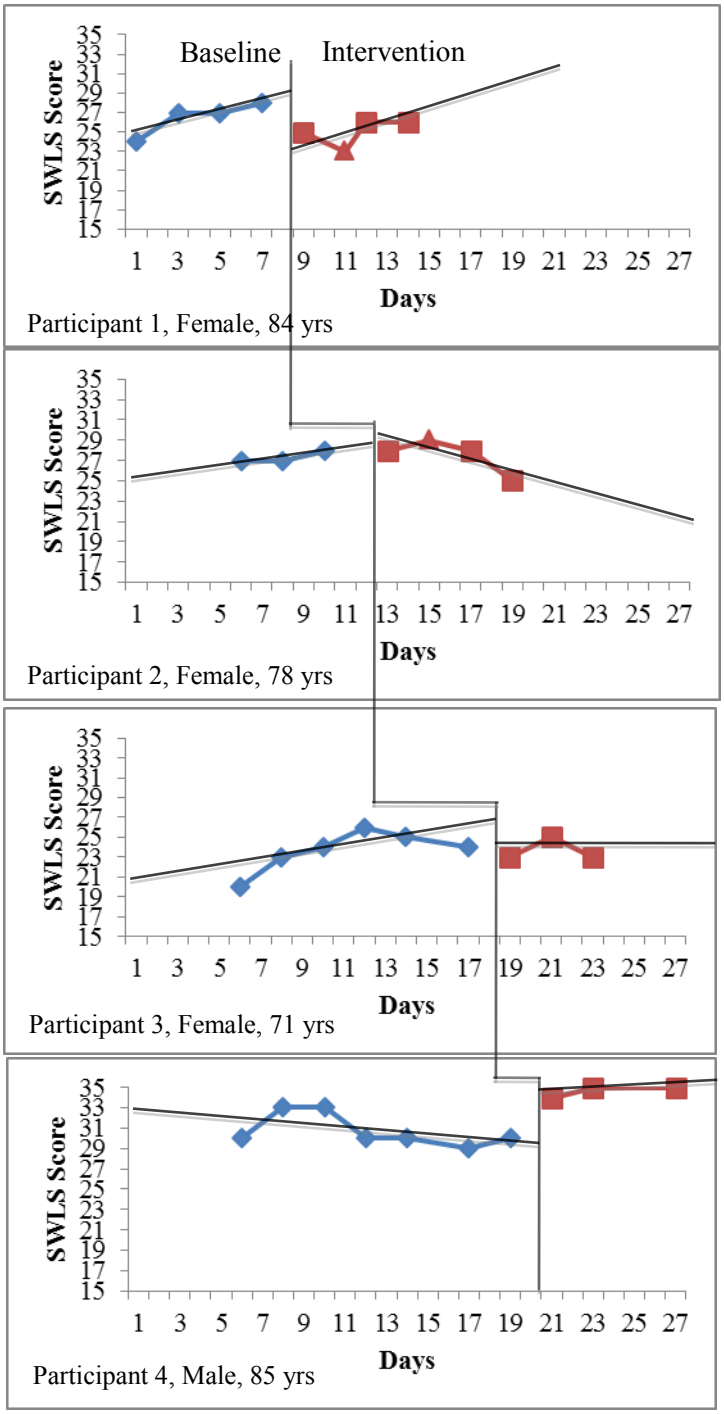

Figure 2. Trend Estimation of Satisfaction With Life Between Participants.

Note. The triangular data point in the intervention phase denotes the instance when the intervention was not provided but the SWLS was still completed by the participant.

Participant one displayed an increasing trend line (*First half Mdn*= 25.5, *Second half Mdn*= 27.5) during the baseline phase and an increasing trend line (*First half Mdn*= 24, *Second half Mdn*= 26) in the intervention phase. Participant one displayed average levels of life satisfaction in the baseline and intervention phase. Satisfaction With Life scores improved after the initial measurement intake and remained relatively stable until the intervention phase. Once the intervention was introduced, scores dropped back to the initial baseline score, worsened even further, and then slightly improved and remained stable. The 3.5 decrease in scores from the second half median score in the baseline phase to the first half median score in the intervention phase is not large enough to indicate changes in satisfaction levels from the intervention. Using the standard deviation of the SWLS as a guideline, large effects are indicated by a six-point difference between scores.

Participant two displayed a slightly increasing trend line (*First half Mdn*= 27, *Second half Mdn*= 27.5) in the baseline phase and a decreasing trend line (*First half Mdn*= 28.5, *Second half Mdn*= 26.5) in the intervention phase. Participant two displayed average levels of life satisfaction in the baseline and intervention phase. Data from the baseline phase into the intervention phase is relatively stable. However, the Satisfaction With Life score appears to worsen at the end of the intervention phase. The intervention did not have large effects on participant two's Satisfaction With Life scores.

Participant three displayed a slightly increasing trend line (*First half Mdn*= 23, *Second half Mdn*= 25) in the baseline phase and a flat trend line (*First half Mdn*= 24, *Second half Mdn*= 24) in the intervention phase. Participant three displayed average Satisfaction With Life levels in the baseline and intervention phase. During the baseline phase, Satisfaction With Life levels consistently improved and then remained relatively

stable at the end of the baseline phase and into the beginning of the intervention phase. The intervention did not appear to have any effect on the participant's Satisfaction With Life levels. While changes in Satisfaction With Life for participant three were not observed, at the end of the intervention participant three stated, "This process made me realize that I have more to be thankful for. I am happier than I was."

Participant four displayed a slightly decreasing trend line (*First half Mdn*= 31.5, *Second half Mdn*= 30) in the baseline phase and a slightly increasing trend line (*First half Mdn*= 34.5, *Second half Mdn*= 35) in the intervention phase. Participant four displayed average Satisfaction With Life scores in the baseline phase and above average Satisfaction With Life scores in the intervention phase. Satisfaction levels improved during the first few days of the baseline phase and then dropped back to the initial baseline score where they remained relatively stable until the intervention was introduced. Satisfaction With Life levels improved once the intervention was introduced and remained relatively stable during the intervention phase. It appears that the intervention caused slight changes in this participant's Satisfaction With Life levels. Median scores from the baseline and intervention phases differ by three to five points.

Objective Observations

An interesting part of the study was that participant four and two had both experienced the loss of a child, which they identified as a pivotal moment in their lives. However, participant two revealed bitterness and guilt regarding the death, and participant four chose to celebrate his child's life. The fact that both participants experienced the same tragedy but held differing perspectives is evident in their scores on the life satisfaction scale.

Participant two directly communicated her appreciation for the continuous social interaction. She asked the researcher to continue to visit after the study, and she stated that she felt as though the researcher was another one of her grandchildren.

In addition, while changes in satisfaction level of participant three were not observed, at the end of the intervention participant three stated, “This process made me realize that I have more to be thankful for. I am happier than I was.”

Discussion

Building Upon Past Research

An initial intent of the present study was to incorporate positive psychology in the evaluation of life review. While the majority of research studied the effects of life review on depression in older adults, research did not assess the influence of life review on happiness in older adults. The purpose of positive psychology is to focus on positive emotions that help people grow and prosper as an individual (Seligman & Csikszentmihalyi, 2000). In the present study, life review was used in a nonclinical population to evaluate whether or not the technique could be used to increase happiness levels in participants. Results showed that happiness was increased for participant four.

The effectiveness of the life review technique with the elderly population has been examined in a variety of studies. Life review has been found to improve cognition in the elderly, increase life satisfaction and well-being, and it has also been used to screen for depressive symptoms (Bohlmeijer et al., 2003; Friedhoff, 1994). While the majority of the research suggests that the life review intervention can be used to decrease symptoms of depression in the elderly (Bohlmeijer et al., 2003; Korte et al., 2009), results differed regarding the effects of life review on individual's levels of life satisfaction. In a study by Preschl et al. (2012), the life review intervention did not have significant effects on participants' life satisfaction levels. Results from the current study were consistent with results from Preschl et al. (2012).

Research suggests that depressive symptoms are associated with decreased levels of life satisfaction (Strine et al., 2009). Past studies reveal that life review has been successfully used to identify and reduce symptoms of depression and anxiety in older

adults (Bohlmeijer et al., 2003; Korte et al., 2009). To the author's knowledge, evidence supporting the use of life review with nonclinical populations does not exist. Essentially, data shows that life review has been helpful in reducing symptoms of depression and anxiety in the clinical population, but could it also be used to further increase life satisfaction and happiness levels in the non-clinical population? The current study incorporated the Subjective Happiness Scale to evaluate the effects of life review on happiness levels in a nonclinical older adult population. Rather than probing for symptoms related to depression and unhappiness, participants were screened for changes in levels of happiness. With the exception of participant one's initial score of fifteen during the baseline period, all of the participants scored within or above the average range on both scales. Therefore, participants in the current study represent a nonclinical population.

Pros and Cons of Life Review

There are strengths and limitations to the life review intervention (Korte et al., 2009). A benefit of life review is that it incorporates two commonly practiced activities of older adults, reminiscing and storytelling (Korte et al., 2009). This method is especially beneficial for individuals who struggle with their own sense of identify and purpose (Korte et al., 2009). Life review gives them the opportunity to face confusing or traumatic periods of their lives, accept these experiences, and find meaning in their struggles (Korte et al., 2009). It also provides individuals with the time to relive joyful and memorable times. Nevertheless, life review as a therapeutic intervention also comes with its limitations (Korte et al., 2009). While a purpose of life review is to reevaluate difficult experiences, this change in perspective is not guaranteed to occur. The process

could reinforce participants' feelings of bitterness, resentment, and victimization from past experiences (Korte et al., 2009). The risk of provoking negative emotions is a limitation of this approach (Korte et al., 2009). Because of this, it is vital that those conducting life review interventions have a therapeutic background or training in behavioral sciences (Korte et al., 2009). While the primary researcher of the current study had therapeutic experience, prior training specifically with the life review technique was not present. Therefore, utilization of the life review technique may have differed from past life review studies.

In addition, the life review intervention is difficult to standardize across all participants. The intervention was based on following the questions from Appendix D, but the researcher was free to ask additional questions for clarification or to expand upon certain events that were perceived to be meaningful to the participant. There are underlying assumptions regarding the education level and socio-economic status of individuals who participate in life review. For example, participants were asked about their career choices and major accomplishments. Questions regarding these topics may need to be rephrased or adjusted depending upon the characteristics of the individuals participating in life review. The nature of the intervention brings both positive and negatives aspects to the study. While the intervention lacks complete standardization, it also offers personalization of treatment for each participant and mimics the real nature of therapy. Future research could compare the effects of a standardized life review intervention to a flexible and personalized life review intervention.

Research Design and Its Limitations

The current study implemented a four subject, multiple baseline design. This is the first four-subject study that has been conducted to analyze the effects of life review on older adults. Single subject designs can be difficult to implement because these designs require strict adherence to standardization (Barlow, Nock, and Hersen, 2009). In single case research, measurements must be performed under precise conditions with regards to time of day, setting, instructions given, and structure of intervention. If precision is not upheld, differences present in the data can be due to deviations from standardized procedures rather than effects of the independent variable. These issues introduce several limitations in the present study. Presentation of measurements was consistent. Items from the Satisfaction With Life Scale and Subjective Happiness Scale were verbally presented to participants on each occasion. While the researcher attempted to keep the time of day consistent regarding when the measurements were presented to participants, this practice was not always possible. On occasion, participants failed to answer the telephone for measurement intake, and life review sessions had to be postponed due to scheduling conflicts. An obstacle in the present study was working around the schedules of the participants. Because of conflicting schedules, an instance occurred during the intervention phase in which participants one and two completed the measurement scales but could not meet for a life review session. These additional data points for participants one and two could have compromised the standardization of the data collection.

There were also issues regarding starting points for participants. Figure 1 and Figure 2 display a difference in baseline phases from participant one and participants two,

three, and four. Baseline data for participant one began at an earlier date than the other three participants. The current study utilizes a multiple baseline across subjects design. The nature of this design involves recording baseline data for multiple subjects at the same time, and then introducing the intervention at different times across subjects. The continuous transition from baseline to intervention allows the researcher to notice any changes from baseline phase and rule out other variables that could be causing the change. The reintroduction of the intervention for each participant establishes the reliability of any effect observed in the intervention phase. Because baseline recordings began at a different time for participant one, any effects seen in participant one would have been difficult to interpret. This lack of standardization could have affected the data considering external factors varied for participant one in comparison to participants two, three, and four. Fortunately, participant one did not display changes from the baseline to the intervention phase, so this was not a large limitation in the present study.

In addition, while the questionnaires were presented in random order to participants, during the last session, participant two had memorized the responses to the questionnaires. Participant two was encouraged to respond based on her feelings at the present time rather than relying on past responses, but this occurrence demonstrates the effect that response bias could have on research data. Response bias is the tendency for participants to respond in a socially desirable manner, based on their perception of how the researcher would want them to respond (Zerbe & Paulhus, 1987). Participant two may have been attempting to maintain consistency in her responses, even though this was not the aim of the study. Providing measures to the participants throughout the entire process allowed for consistent observation of the data, but it also came with limitations

considering participants became familiar with the measures being used. The SHS contained four items and the SWLS contained five items. The limited number of items makes memorizing the measures quite simple. Choosing scales with a wider range of questions that measured the constructs of happiness and life satisfaction in depth may have controlled for response bias.

In addition, an in depth scale may have more accurately assessed changes in participants' happiness and life satisfaction levels. Perhaps happiness and life satisfaction levels were affected by the intervention for participant three, but these changes were not demonstrated by the measures in the current study. A limit of the SWLS is that all of the items were phrased positively, so it did not control for response sets. In contrast, the SHS contained a reversed item, so participants were not able to respond in the same manner to all of the items on the SHS measure. Additional research can utilize different measures to analyze the effects of life review on the older adult population.

Interpretation of Results

Results were analyzed using a split middle method of analysis, developed by White and Haring (1980), which was designed to demonstrate whether data exhibits accelerating, decelerating, or stable trends. In this type of analysis, information from the data points is summarized in a trend line to analyze the effects of the intervention (Nourbakhsh & Ottenbacher, 1994). The split middle method was used to analyze data for both the Subjective Happiness Scale and Satisfaction With Life Scale. Data from the Subjective Happiness Scale and the Satisfaction With Life did not indicate effects in the participants' data from the intervention with the exception of participant four. While the

majority of the participants did not experience an effect on happiness levels from the intervention, participants one and three display an increase in Subjective Happiness levels during the baseline phase, and participants one, three, and five displayed an increase in Satisfaction With Life levels in the beginning of the study. It could be hypothesized that the initial increase in data was due to the time and attention given to the participants by the researcher. Gathering information regarding the amount of social interaction the participants engage in on a daily basis could have provided insight regarding the effects that participation alone had on participants' happiness and satisfaction levels. Participants one and three showed an increase in subjective happiness scores followed by an immediate drop at the termination of the intervention. It could be hypothesized that the decrease in scores at the end of the intervention could be due to the participants' knowledge of the termination of the study. Termination of the study meant that frequent social interactions (visits and phone calls) from the researcher would be coming to an end.

Data from the Satisfaction With Life Scales indicates that there were not large changes in participants' levels of life satisfaction from the beginning to the end of the intervention, with the exception of participant four. Participant four showed obvious increases in satisfaction levels once the intervention was introduced. In contrast, participant two showed a steady decrease in life satisfaction levels once the intervention was introduced. This diversity within the data exhibits the differing reactions participants had to this type of intervention. As mentioned before, life review runs the risk of inducing bitterness revival in some individuals (Korte et al., 2009), which may have been the reason for the decrease in participant two's satisfaction levels.

Based on the results, the hypothesis that life review in a nonclinical population would increase participant's Satisfaction With Life and Subjective Happiness was supported for only one of the participants. The fact that the hypothesis was supported for participant four suggests that life review could be beneficial for certain individuals that are not in a clinical population, given specific characteristics. Participant four differed from the others in gender. Unlike participants one, two, and three, participant four is male. Gender and age of the researcher may be associated with the effectiveness of life review. The researcher in the current study is a 23-year-old female. Interacting with a young female woman may have influenced participant four's happiness and satisfaction levels. In addition, participant four indicated that he engaged in fewer social activities at Village Manor in comparison to the other three participants. Participants one, two, and three were active in local religious institutions, and they participated in social and fitness groups in the independent living community. Participant four stated that he spent most of his time in his room, and that he relied on his son-in-law to take him to run errands on the weekends. The life review intervention may be most beneficial for individuals who lack social stimulation versus individuals who maintain relatively active lifestyles. While results from Watt's and Cappeliez's (2000) study did not suggest significant differences between the social control group and the life review intervention group on the social adjustment scale, results nevertheless indicated increases in social adjustment post life review intervention. The Social Adjustment Scale measured satisfaction in social activities, relationships with others, and social roles (Weissman & Bothwell, 1976). Therefore, participant four's increase in scores may have been due to positive reactions to social interaction.

Future Research

The results of the present study provide many implications for future research on life review in older adults. As previously stated, participants one, two, and three maintained active lifestyles, and they continuously had to schedule life review sessions around their own daily activities. These participants may have agreed to participate in the study because of guilt rather than an actual desire to engage in life review, and they may have preferred to dedicate time to their other daily activities rather than participate in the study. Evaluating these factors would have been helpful to understand the participants' feelings about participating in the intervention. Perhaps the intervention did not effect participant one, two, and three's happiness and satisfaction levels because they were not interested in dedicating time to improve these levels before the study began.

Besides social interaction, the initial increase in subjective happiness for participants one and three, and the initial increase on life satisfaction in all of the participants could also be indicative of a general effect of research participation. While there are more elderly people alive today than any other time in history, this group is undervalued in clinical research (McMurdo et al., 2005). Research analysis in 2004 revealed that 15% of studies excluded older individuals without justification, and less than 5% of published articles were specific to this population (McMurdo et al., 2005). The reason for this exclusion may be due to the fact that researchers value low dropout rates and minimal participant complications, which are risks with research in older individuals (McMurdo et al., 2005). Issues with drug interactions, illness, injury, and even death deter researchers from including older people in research samples (Townsley, Shelby, Siu, 2005). Secondly, the elderly are considered a vulnerable population in

research, which requires increased protection and supervision from researchers involved (McMurdo et al., 2005). The process of enrolling older adults in research can also be strenuous and time consuming in comparison to younger adults (McMurdo et al., 2005). Screening and participation may take longer due to the issues with hearing, memory loss, and immobility in this population, and many elders wish to discuss the process with family members before agreeing to participate in studies (McMurdo et al., 2005). Because of these issues, the elderly are an under-represented population in clinical research despite the need for research on this population (McMurdo et al., 2005). Older people report a willingness to participate in studies (Peterson, Lytle, Alexander, & Coombs, 2005). Simply including them in the study may have caused the initial increase in scores. Future research could examine whether or not participating in research studies has an additional effect on the elderly or socially disconnected individuals. Additional research could also examine other factors, such as self-esteem, to further test the effects of life review in a non-clinical population.

The nature of the intervention may have been the cause of the increases and decreases in scores across the participants. For example, each data point in the intervention phase represents life review of childhood, younger adulthood, or older adulthood. Depending on the individual and the experiences he or she had during these times, scores would display high or low levels of happiness and life satisfaction. Using the data to evaluate the periods in the individual's life that were filled with the most dissatisfaction and unhappiness gives the researcher an awareness of which life events need to be re-evaluated. Participants one and three displayed lowest levels of subjective happiness after the life review session on older adulthood. Using this information, the

researcher and participant could further reflect on the experiences and events during the participant's adult life in an effort to identify major struggles, develop ways to accept these challenges, and find meaning in his or her own journey. Further research could evaluate the effects of life review within each phase of childhood, younger adulthood, and older adulthood. Rather than analyzing the effects of the intervention as a whole, one could determine whether life review is more successful when focusing on certain phases of life.

The structure of the intervention also requires careful planning and consideration. Because life review interventions are not all standard, they can be organized and composed in different ways (Kort et al., 2009). Simple reminiscence is an unstructured recall of past memories, while life review is structured and involves a focus on the entire life span (Kort et al., 2009). Life review can also incorporate incremental or instrumental reminiscence techniques, depending on the purpose of the intervention (Bohlmeijer et al. (2008). The current study incorporated a mixture of both techniques for all of the participants. Considering the current study used the same approach for males and females, the effectiveness of the intervention may have been limited. Results could be affected by researchers' choice regarding the nature of the intervention. Future research could analyze the effect of interventions that solely focus on positive or negative memories as well as the effects of structured versus unstructured interventions.

Conclusions

Results from participants one, two, and three do not confirm the current hypothesis. However, results reveal an increase in subjective happiness and life satisfaction in participant four and a decrease in life satisfaction in participant one. A

possible explanation could be that participant four lacked adequate social interaction in comparison to the other participants, and that participation and attention from the researcher provided him with increased levels of happiness and satisfaction. The intervention did not appear to provide participants one, two, and three with the opportunity to re-evaluate life experiences and find meaning in seemingly negative events. However, the intervention did not appear to worsen levels of happiness and satisfaction in participants one through three either. The differing results indicate that further research should be conducted on life review and the variables involved in its success as an intervention. Variables such as personality characteristics, past trauma, current physical and psychological health, activity level, and current social support may have an effect on the usefulness of life review interventions.

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APPENDIX A
Demographics Questionnaire

1. What is your age?

_____

2. What is your gender?

____ Male
____ Female
____ Transgender

3. How would you classify yourself?

____ White
____ Black or African American
____ American Indian or Alaskan Native
____ Asian
____ Native Hawaiian or other Pacific Islander
____ Hispanic or Latino
____ Non-Hispanic or Latino

4. What is your current marital status?

____ Married
____ Single
____ Widowed
____ Divorced
____ Living with another

5. How long have you been living at the independent living community?

____ Less than a year
____ 1-5 years
____ 5-10 years
____ 10+ years

6. Have you ever participated in a life review study? If so, what did you think about the study?

APPENDIX B
Subjective Happiness Scale

1. In general, I consider myself:
not a very happy person 1 2 3 4 5 6 7 a very happy person

2. Compared with most of my peers, I consider myself:
less happy 1 2 3 4 5 6 7 more happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?
not at all 1 2 3 4 5 6 7 a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?
not at all 1 2 3 4 5 6 7 a great deal

APPENDIX C
Satisfaction with Life Scale

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by verbally stating the appropriate number to the preceding item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

____ In most ways my life is close to my ideal.

____ The conditions of my life are excellent.

____ I am satisfied with my life.

____ So far I have gotten the important things I want in life.

____ If I could live my life over, I would change almost nothing.

- 31 - 35 Extremely satisfied
- 26 - 30 Satisfied
- 21 - 25 Slightly satisfied
- 20 Neutral
- 15 - 19 Slightly dissatisfied
- 10 - 14 Dissatisfied
- 5 - 9 Extremely dissatisfied

APPENDIX D
Life Review

Childhood

- Where were you born?
- What do you remember most about your parents?
- What is your favorite childhood memory?
- Who did you spend most of your time with as a child?
- Who had the most significant influence on you as a child?

Adolescence

- Residence: Formal experiences (spiritual/secular/education/achievements/awards):
- What was it like to be a teenager?
- Who was your best friend?
- What were your goals as a teenager?
- Who was your first love and how did you meet?
- What were your greatest lessons at this age?

Adulthood

- Where did you live throughout your adulthood?
- Tell me about your career choices, experiences, and any awards you received from it
- Travels, national service:
- What was your main career?
- What was the highest grade you completed?
- Did you get married? When did you know you wanted to be married? What was your wedding like?
- Did you have children? What is your fondest memory about each of your children?
- What were your goals as an adult?
- Tell me about any struggles as an adult you had to overcome
- What were your fondest memories during this time?

Older Adulthood

- Home(s):
- Grandchildren, great-grandchildren:
- Career experiences, achievements, awards:
- Health challenges and outcomes:
- What is your greatest accomplishment in life?
- If you had a chance to go back in time, is there anything you would have done differently?
- What was the happiest time of your life?
- What do you want your family/friends to remember most about you?

APPENDIX E
Institutional Review Board Approval

INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE:	March 9, 2015
TO:	Molly White, B.A.
FROM:	Western Kentucky University (WKU) IRB
PROJECT TITLE:	[725039-1] Effects of Life Reflection on Satisfaction and Happiness in the Elderly Population
REFERENCE #:	IRB 15-316
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	March 9, 2015
EXPIRATION DATE:	May 12, 2015
REVIEW TYPE:	Expedited Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a *signed* consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of May 12, 2015.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wku.edu. Please include your project title and reference number in all correspondence with this committee.

APPENDIX F
Informed Consent Document

Project Title: Effects of Life Review Therapy on Well Being in the Elderly Population
Investigator: Molly White, Department of Psychology, (502-552-3977)
Supervisor: Dr. Sally Kuhlenschmidt, Department of Psychology, (270-745-2114)

All information obtained will be treated with the strictest confidentially. The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask him/her any questions you have to help you understand the project. Please read this explanation and discuss with the researcher any questions you may have.

1. **Nature and Purpose of the Project:**

As a graduate student in the Department of Psychology and under the supervision of Dr. Sally Kuhlenschmidt in the Department of Psychology at Western Kentucky University, I am conducting research on life review therapy. The purpose of this study is to help the researcher discover the effects of life review therapy on the well being of older adults.

2. **Explanation of Procedures:**

I ask that you participate in a life reflection process. The process will include three 50-minute sessions. You will be asked to complete two questionnaires at various times during the intervention process. At the end of the process, you will be asked to write or dictate a letter to your younger self.

3. **Discomfort and Risks:**

There are few foreseeable risks associated with this research project. Participants may feel discomfort when reflecting on life experiences or memories. Participants may experience boredom from repeatedly taking the questionnaires. Nevertheless, the probability and magnitude of harm or discomfort anticipated in the research is minimal.

4. **Benefits:**

You may experience positive benefits from reflecting on life experiences and positive memories. While you may not benefit directly from participation in this study, it is hoped that the knowledge gained through your participation will help others at a later time.

5. **Confidentiality:**

Identifiable information will be coded using numbers to assure anonymity. No one except the researcher and the supervisor will have access to the data. Data will be kept in a confidential locket cabinet following the study.

6. **Refusal/Withdrawal:**

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator (270) 745-2129